DOCUMENT RESUME

ED 087 468 IR 000 214

AUTHOR	Egly, Max
TITLE	Consequences of the Use of "Video" Technologies For Education and Culture. An International Seminar Organized With the Assistance of UNESCO (Vichy, France, May 2 through 6, 1972).
INSTITUTION	French Commission for UNESCO, Paris.
SPONS AGENCY	United Nations Educational, Scientific, and Cultural Organization, Paris (France).
PUB DATE	May 72
NOTE	59p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Conference Reports; *Culture; *Educational Technology; *Educational Television; Experimental Programs; *Problems; *Public Policy; Technology; Television
IDENTIFIERS	*Auto Video; UNESCO

ABSTRACT

An overview based upon papers presented and discussions held at the seminar is presented. The major focus is upon the theme "Auto-Video", emphasizing the assumption by the public of responsibility for its own training, education and culture. The aims are to study the pedagogical and socio-cultural aspects of video technologies and to draw up recommendations to the United Nations Educational, Scientific, and Cultural Organization which will aid its member states in developing and improving video technologies. Section I discusses video technology's importance and reviews eight experimental projects. Section II deals with problems related to new concepts, new audiences, new teachers, new producers, new documents and new systems. A brief concluding section lists some recommendations. A list of participants, a roster of working documents and a bibliography are appended. (Author/PB)

ED 087468

CONSEQUENCES OF THE USE OF "VIDEO" TECHNOLOGIES FOR EDUCATION AND CULTURE

An international Seminar organized with the assistance of Unesco

VICHY - May 2-6, 1972

Rapporteur : Max EGLY

FRENCH COMMISSION FOR UNESCO, 21 bis, rue La Pérouse - 75116 Paris

R 000 214

CONSEQUENCES OF THE USE OF "VIDEO" TECHNOLOGIES FOR EDUCATION AND CULTURE

An international Seminar organized with the assistance of Unesco

VICHY - May 2-6, 1972

Rapporteur : Max EGLY

(Original : French)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

FRENCH COMMISSION FOR UNESCO, 21 bis, rue La Pérouse - 75116 Paris

SUMMARY

INTRODUCTION page 1

I - VIDEO TECHNOLOGIES

1. The importance of video today 5

2. Experiments 9

2.1. A.L.P.S. 9

2.2. The Open University 10

2.3. Grenoble 11

2.4. Mostaganem I.T.A. 12

2.5. Tele-Niger 13

2.6. Community networks (Quebec) 14

2.7. Multi-media 15

2.8. Videographe 16

II - PROBLEMATICS 19

1. New concepts 21

2. The new audience 22

3. The new teacher 24

4. The new producer 27

5. The new document 30

6. Toward new systems 32

CONCLUSION 37

ANNEXES 41

Annex I : List of participants 43

Annex II : Working documents 47

Annex III : Bibliography 48

From May 2 to 6, 1972, the French Commission for Unesco organized a seminar, in Vichy, on "the consequences of the use of 'video' technologies for education and culture", with the assistance of Unesco.

The meeting was held under the distinguished and able chairmanship of Sir Anthony Bates. The papers and discussions were grouped around the theme, "Auto-Video", in order to point out the emphasis placed on the taking over, by the public, of its own education, training and culture. In addition, the background material sent to participants before the opening of the seminar specified that question of equipment , of "hardware," would not be discussed.

The aims of the seminar were the study of pedagogical and socio-cultural aspects, and the drawing up of recommendations to Unesco which might aid Member States wishing to develop or improve the use of video technologies.

The present report was written on the basis of the papers presented by participants and the discussions which followed the presentation of these papers or the screening of films or video tapes. It also takes into consideration the written documents distributed to participants during the seminar.

I - VIDEO TECHNOLOGIES

1. The importance of video today

It may seem paradoxical to have organized the program of a whole seminar around a single technique, "video" - a technique which, furthermore, is bot entirely new, since it was born with television itself. It may be still more surprising to note that this seminar dealt only with problems of "software" : that it did not study video as a *technique*, but concentrated on the problems raised by the use of video *technologies*. Why this passage from technique to technology ? Why this return of video to the foreground of the audio-visual stage ?

Several concurring factors explain this renaissance or rather this transmutation. These factors vary both in kind and in importance. The first of them, whose role is decisive, belongs to the field of technique ; the others stem more or less directly from it. Furthermore, it happens that new video techniques are being developed and put on the market at the same time as new needs are arising in the world of education and culture. It is less important to ponder this new confirmation of the philosophical adage that "mankind never raises any problems except those it can solve" than it is to try to study, as was done at this seminar, *how* the solutions may be found, and what new means are at the disposal of the public and various mediators, teachers, "animateurs", creators and administrators.

Video technique may be considered as the use of means that are essentially electronic for the production, reproduction and dissemination of audio-visual messages. In fact, video techniques reduce the use of mechanical and chemical processes to the minimum. In this sense, they are radically different from the techniques of the cinema ; the difference results in a shortening and a modification of the time necessary for making messages.

Electronic editing is done without glue, splicers or changes in recordings ; electronic images can be corrected or altered without having to be put through a chimical bath. The film maker must adapt the rhythm of his work to that of laboratories, just as the farmer must adapt his to the changing seasons, whereas (theoretically) the video creator's time coincides with the time actually needed for creation.

The electronic image can appear just as soon as its creator has decided to make it do so. This instantaneousness not only leads to a drop in production costs ; it also changes the creator's attitude fundamentally.

What are these innovations that can so basically change educational technology ? In the paper he presented to the seminar, Raymond RAVAR described them thus :

"The new video technology has, so far, two basic aspects :

. miniaturization of a picture-sound message lasting from 15 minutes (videodisc-Teldec) to 60 minutes (EVR and selectavision), originally recorded by any process whatsoever, distributed through cassettes or discs, read by a reproducing apparatus and shown on a television screen ;

. the same process, with the additional possibility that the consumer can record or erase the message (all kinds of "record and playback" systems). Magnetic recording (Instavision, Cartivision VCR, Vidéocassette (Sony) etc...)

To this should be added :

"Cable television, its development since the early models ; broad-band television ; traditional closed circuits".

In the report he presented to the Unesco Round Table in Belgrade, Mr Ravar said :

"At present, there exist more than forty processes for the recording and reproduction of picture-sound sequences, audio-visual messages. Three main types may be distinguished :

. photographic (of the super-8 type);

. photomechanical (including holographic treatment and videodisc) ;

. magnetic (using 5 to 7.5 millimeter magnetic tape).

"Equipment of these types permit the storage, for reproduction, of 5-minute to 60-minute programs, audio-visual messages *from any source whatsoever*, in black-and-white or in color ...."

Along with the development of this great variety of new technical apparatus goes a very considerable reduction in costs, which puts means of recording, storing and reproducing audio-visual messages really within financial reach of a large number of people. Because of their weight, their complexity and their cost, these means used to be reserved for a small number of official or private bodies ; their relative scarcity corresponded to a certain kind of professionalism. In addition, the new machines have the advantage of being light enough to be portable. Television need no longer depend on studios. We shall see further on the important role played by the "Portapak" in operations in Quebec.

Hence it now seems possible to talk about democratizing audio-visual means of expression. "Here the consumer can become his own producer and, directly, his own creator". Forecast studies confirm this tendency. In one such study, on videocassettes, made for the Council of Europe, Mr. J. C. Batz looks at the prospects for long-term development of societies of the industrial type and notes three important factors :

" a) the great increase in per capita income (which would triple between now and the year 2000) ;

" b) the increase in free time (which would be between 50 % and 100 %) ;

" c) the increase in the lenght of compulsory schooling ... the considerable extension of higher education ... the development of permanent education and the multiplication of refresher courses or other courses for adults..."

In view of such predictions, it is hardly astonishing that some people believe the present situation involves more than the democratization of audio-visual technologies, they talk about a revolution. "Audio-visual media will be mature tomorrow morning...", "We must lose no time preparing the post-television era" ; "... If we could look at it from the point of view of future generations, the videocassette might seem just as important in the history of mankind as the printed book has seemed for centuries" (J. C. Batz). *

---

* However, in the opinion of some participants, these prospects can be realized only in highly industrialized countries ; and, even in these, existing economic constraints must be taken into account. In Great Britain, for example, these constraints make it inconceivable that a cable television network will be set up before twenty years from now.

Democratization, revolution, or mutation, the list of prophetic quotations would be long and would find considerable support in the work of Mr. Macluhan. But, in spite of the fact that it included a futurologist among its members, the seminar paid more attention to analyzing the present situation than to making very long-term projections.

Changes affecting the world of education and culture seem no less important than technical innovations. Quantitative changes : a growing number of individuals -children, adolescents and adults- are ceaselessly increasing the "clientèle" of the audio-visual media and particularly of television. This increase is not merely a phenomenon of addition : it reflects more and more clearly a diversity of needs, in other words, the development of a variety of audiences. So far, television has been one of the typical mass media ; now it is coming into the field of the group media.

The very relationship between audiences and the sources of knowledge is tending to change. The teacher-student relationship is no longer considered the only mode of communication : beside the specialist, the professional, appears the "animateur". Access to documents (printed or audio-visual) is becoming freer : beside the library and the museum appear the audio-visual library, the language laboratory, the data bank.

Attempts to make education more flexible, or broader, are succeeding the rigid old systems characterized by set curricula and examinations : there is the Open university in Great Britain, the University without Walls in the United States, Tevec in Canada.

Attempts are being made to promote the participation of the public at all the levels of an educational or cultural system. As noted at the beginning of this report, it was this concern for encouraging the public to take over its own teaching, training and culture which led the seminar to be centered around the theme : "Auto-video".

This brief reminder may give an idea of what needs the new video is capable of filling, through its flexibility, versatility and possibilities for diversification ; it offers feedbacks which even permit the roles of creator and consumer to be combined.

2. Experiments

In order to avoid the dangers of too abstract a study, and to share information among the various participants, the first part of the seminar was devoted to consideration of a number of experiments, all utilizing video technologies in new and significant ways.

Space does not permit the accounts of these various experiments to be reproduced here in full. We shall simply recall the chief points of interest stressed in each of them from the general "auto-video" point of view. To do so, we have drawn on information presented orally by participants and on the various documents which they furnished to the organizing group. We shall take up successively : A.L.P.S. (U.S.A.), the Open University (Great Britain), the plan for the new town on the outskirts of Grenoble (France), ITA de Nostaganem (Algeria), Télé-Niger (Niger), and the Canadian experiments made in Quebec : Normandin, Multi media an videographe.

2.1. *A.L.P.S.*

A.L.P.S. (Adult Learning Program Service) proposes to present a group of teaching experiments serving an adult audience, made up of men and women between the ages of 25 to 44 who have not finshed secondary school but who have at least reached sixth-grade level. It goes without saying, Mr Adelson stressed, that A.L.P.S. will also be interesting to other audiences, younger or older, or having a lower or higher scholastic level.

The materials produced will be adapted chiefly to the following fields : behavior, reading, aritnmetic ; they will be directly related to the adult's life at home, at work and within the community. The programs will be of various types, in order to hold the interest of the audience, and mixtures of various types (games, drama, sport) may well be used. For the time being,

A.L.P.S. has no plans for broadcasting direct teaching. Material will be presented in the form of modules, whose lenght will depend on content, in order to make local use more flexible.

To begin with, use will be made of radio and television, and public network ; then of other means (such as cassettes, cable television, film, etc.). For group reception, A.L.P.S. groups will be set up in social and denominational clubs, in trade union branches and at places of work.

To motivate the audience, it is planned to point out that A.L.P.S. can help people prepare for examinations which give them the equivalents of existing diplomas (examinations given at the local level) and improve their chances on the labor market or their chances of obtaining scholarships. An intensive information campaign will be carried out at the local level, along with a market study on a national scale.

Complete materials are expected to be put into use toward the end of 1973 or early in 1974.

2.2. *THE OPEN UNIVERSITY*

Mr. Bates's paper was not a presentation of the Open University, an operation with which the participants were already familiar ; it dealt with "the role of the teacher in a video-teaching system". In this university, the biggest in Great Britain, with 26000 students, control over methods and content is not exercised by the teacher who is in direct contact with the students. Furthermore, in this system, the video element is only one element in a multimedia whole. Working out the program necessarily requires teamwork. This teamwork heightens the quality of the materials produced, both because the team brings together highly competent specialists, and because each of them has to justify his work to his colleagues on the team and to present it very clearly to the production group. Teamwork presents new problems : general objectives must be defined very precisely, as must be each person's task and also the level of the course. Each member of the team must accept these decisions. The students benefit directly from this harmonious work. To make things run smoothly, the fact that the members of the team are aware of the necessity for these decisions is more important than the decisions themselves. Assignments and examination papers

must be corrected by teachers other than those who designed the course and set the criteria for marking. The inclusion of a video element raises special problems. Its use is easy in Great Britain, but the production of high quality documents is still relatively expensive and is often time-consuming. Such documents make up one-tenth of the time the student is expected to spend on his course, but take up half the teachers'working time. Hence the problem arises of what subjects to treat by video. But criteria of choice are lacking. Similarly, there is the problem of integrating video programs with the contents of printed documents. The system has been made more flexible by freeing broadcasts from a strict lesson-by-lesson, correlation with the corresponding text, while explaining to the students what is, in each case, the true relation between these two elements.This leads to a structure that is complex, but necessarily so. Hence the design and operation of a centralized tele-teaching system require great organizing and administrative talents on the part of the members of the team. The industrialization of such an enterprise, furthermore, entails a diversification of tasks and a multiplication of specialities : educational technologists, "intermediary" teachers, tutors, advisers, roles which occupy more than 4500 persons on a part time basis. Problems of recruitment and the organization of work arise in new terms for the Open University, which must avoid both the dangers of improvisation and those of neo-conformism. Mr. Bates expressed a series reflections which should give pause to those who are a priori detractors of tele-teaching. As, for instance : "The principal - and paradoxical - role of direct contacts between intermediary teachers and students is to teach the students how to do without direct contacts."

2.3. *GRENOBLE*

The operation is being carried out in the first section of a new town situated near Grenoble. This section is "the site of an experiment in integrated facilities in which the functions of education, leisure and cultural animation are coordinated without segregation of groupsor age levels, thanks to a set of pluridisciplinary teams. One of the basic characteristics of this experiment is the important role assigned to audio-visual creation," said Mr. Daniel Populus in his report.

This project aims to put into effect a large number of modern trends in educational and cultural action : integration, versatility, a high degree of adaptation to local needs, training in research and expression through audio-visual language, group reception, real participation, new management structures.

The planned facilities seem to correspond with the ambitions of the project. After presentation of the paper, and during the ensuing discussion, many questions were asked, most of them dealing with the application of a communauty system not hitherto achieved in France - the statutes of the project, management, relations with local and national bodies, relations with professional groups.

2.4. *MOSTAGANEM INSTITUTE OF AGRICULTURAL TECHNOLOGY (I.T.A.)*

The Mostaganem Institute of Agricultural Technology was set up to fill the need for training :

. the large numbers of agricultural engineers (about 5ooo in ten years) who are indispensable for the development of Algerian agriculture and the transformation of agrarian structures ;

. agents qualified to take over, very soon, important responsabilities in the context of new operations stemming from the political, economic and social options of Algeria (paper presented by Mr. G. Sevin).

To achieve its aim, I.T.A. was based on new educational principles, and, in addition, on the use of closed-circuits television. From an educational point of view, the aim was :

" - to have the students gradually take over their own training, thanks to :

. a search for new motivations based on professional contacts and continuing self-evaluation ;

. the use of group teaching, initiated and sustained by animators whose role is to bring each group up to the maximum level of autonomy ;

. the assumption of responsability by the students in the training of newly formed groups. To which should be added the study of student participation in 'defining the stages of training and the methods of analysis to be used in programmed teaching."

The closed circuit may be used in a number of ways :

. live broadcast of lectures or discussions ;

. delayed transmission of teaching materials ;

. on-the-spot recordings of real situations in the field ;

. the setting-up of a centralized conference circuit, with feedbacks from each group of students through an interphone system;

. the transmission, from one group of students to the other groups, of reflections concerning a problem or a fact encountered in the course of training.

It should be noted that, since the establishment of I.T.A., the number of engineers in training has been not doubled, tripled or even quadrupled, but multiplied by 25.

2.5. *TELE-NIGER*

Tele-Niger is an example of a system of tele-teaching at the elementary school level. The operation, which at present reaches only twenty-two classes through open-circuit television, had a double aim : on the one hand, to raise the country's school-attendance rate (from 8 % to 25-30 % in ten years), and, on the other hand, to work out an educational system which would be new in methods and contents, adapted to the Niger's way of life, and suited to the needs of a developing country.

Although it was developed from a "broadcasting" point of view, and thus extremely centralized, the Tele-Niger system is interesting, from the seminar's point of view, for the following reasons :

. the contribution of the television broadcast is essential for teaching because the classes are run, not by highly trained teachers, but by leaders whose initial training was confined to a two-and-half-month course.

. Hence the person in charge of the classroom is not the essential source of knowledge, but rather an animateur whose task is to help the children assimilate the televised messages.

. courses were produced exclusively with electronic equipment ; they were recorded on two-inch tape, in studios in Niamey, the capital. thus they can easily be adapted or re-edited.

. this production (660 15-minute broadcasts a year) was done by a small team according to standards rather different from those usually recognized by professional groups.

. the experimental character of the operation led to many comments, particularly as regards the adaptation of the video picture to the educational intent, and the circumstances under which the picture was received, by groups of pupils regularly exposed to a televisual continuum. (it was even possible to carry out a whole week of "free reception", during which the pupils were alone in the classroom, guided by an uninterrupted television program and without any leader).

2.6. *COMMUNITY NETWORKS (QUEBEC)*

The various Canadian projects presented by the delegates from Quebec (Messrs. Normand Cloutier and Gérard Lapointe) attracted special attention on the part of the participants, both because of the extensive means used and because of the daring solutions adopted.

The first paper was devoted to the community cable television networks which were a more or less direct consequence of the Tévec operation. Community television in the village of Normandin came about as a result of the demands of a local population which had participed in the Tévec experiment and wanted "a studio outside the school". Poor and for a long time isolated, this region nevertheless had a cable network. (There are 360 cable system in Canada ; they reach 22,8 % of homes and are concentrated in certain regions, including Three Rivers and Sherbrooks in Quebec). The operation began in November, 1970, when the Société Nouvelle/Challenge for Change team organized a week-long training course for 90 persons, who learned to use video equipment. In December, the project got off to its official start. The group had 6 video cameras and several technicians. Its objectives were two :

. to give everyone a chance to express himself ;

. to provide social animation.

Two remarkable phenomena must be point out : the Normandin broadcasts presenting current events from a public-service point of view, and the live broadcasting of the meetings of the St-Félicien town council, with direct telephone connections with the audience. In fact, a large number of people are available and are capable of becoming cameramen and activity leaders. In a general way, this operation illustrates the transition from local television to community television ; and it also illustrates the importance of video cameras even more than the advantages of cable.

2.7. *MULTI MEDIA*

The Multi-media program, which was conceived as a result of reflections on the Tévec project, was still, at the time of the seminar, in the pre-operational stage. Its principal aim is to create a climate, and set up the conditions, which will enable adults to utilize existing resources : libraries, newspapers, films, as well as the "personal resources" provided by their neighbors. The atmosphere should also promote group work and mutual training. Special films, radio and television broadcasts and printed material are also planned. Contents will be mainly educational and sociological, but will also be linked with provincial priorities, in Quebec, as defined both by the government and by various associations. Participation structures are planned, including opportunities for people to make their own video tapes.

This project is scheduled to begin in october, 1972, in three regions of the province of Quebec : Montreal, Abitibi and Lake St. John. A number of problems have yet to be completely solved. These concern :

. relations between the persons responsible for the project and government services ;

. choice of media and the way in which the various media are to be combined ;

. sustaining public interest throughout the project ;

. relations with Radio-Quebec ;

. risks of political takeovers.

Obviously it was the Multi-media aspect of the project - its use of all available media- which attracted most attention during the discussions, but participants were also much interested by the fact that the public would have free access to the means of production ; in the various difficulties encountered here, as in Grenoble, in working out a program intended for such a variety of audiences and needs ; and in the necessity for devising a new legal status for this kind of operation.

2.3. *VIDEOGRAPHE*

"Videographe is a production center, a video theatre and a distribution service which provides videotapes on request.

"It is also a research and experimental workshop in the field of half-inch video.

"It has its headquarters at 1604 St. Denis, in downtown Montreal.

"It is open 24 hours a day, seven days a week."

Such is the brief description provided by Mr. Normand Cloutier, a representative of this new center (officially launched November 27, 1971), which is exploring, concretely and creatively, a great many of the new paths opened by video techniques.

For instance :

. opportunities offered, without expense, to the public at large, and particularly to young people, to express themselves through video ;

. an introduction, not to professional specialization, but to a "production ethic"

. an attempt to bring the "artisans" into their own program committee ;

. ensuring universal distribution rights for all video tapes ;

. individual screenings24 hours a day, through the use of cassettes ;

. a free reproduction and distribution service for videotapes ;

. videotaping of 8 mm, super-8 and 16 mm film ;

. research and experiment in the technical field with the aim of "finding the least costly and least complex solutions possible, so that they may be within reach of all citizens."

Videographe is nationally financed. By the time it was three months old, it had already programmed 51 productions (average length : 29 minutes) involving 250 persons. Requests were increasing : at the end of March, they were coming in at the rate of 30 a week.

We shall come back to certain aspects of videographe - the "video-mirror" and "video-expression" - aspects which, incidentally, continued to be subjects of discussion throughout the seminar.

II - PROBLEMATICS

The mere comparison of the experiments presented permitted constants to be discerned, and thus the elements of problematics. These elements were further defined through the synthetic approach presented by Mr. Jean Valérien under the title, Toward educational and cultural self-service. Can technical progress alone make it possible, without changing the established system, to give more and more individuals the benefit of education, training and culture ? To do this, does it suffice to increase purchasing power and encourage consumption ? "We know today that any training system for adults which does not obtain the support and active participation of the people to be trained is doomed to failure." With this essential participation as a starting point (and such participation may be equally essential in other fields than the training of adults), Mr. Valérien outlined the framework for a new multi-media system, and stressed the importance of the socio-economic and political problems raised by such an innovation.

1. New concepts

The number and novelty of the problems raised makes it difficult to lay them out systematically. Furthermore, at the end of the seminar, all the participants agreed that many questions had been asked and that most of them had received no satisfactory answer. In the pages which follow, we shall try to clarify the wealth of ideas brought out during the discussions, by looking at various themes which regularly recurred as a focus for debate. Through words whose meaning and associations were apparently familiar to all, new concepts were in fact expressed, concepts which either reflected a subtle change in reality or indicated the need for innovations.

Certain terminological substitutions, in themselves, express this change. Nowadays we talk less and less about audio-visual techniques and more and more about educational technology ; similarly, certain other replacements might be noted, as for example :

"Broadcast" by "module"

"Audience" by "population"

"Artist" by "artisan"

"Teacher" by "animateur"

"Distribution center" by "electronic forum" ;

"Distribution" by "exchange",

and, at an extreme, we might note the disappearance of the "television system" in favor of the "multi-media system" and the corresponding disappearance of "cultural object" in favor of "cultural environment".

Rather than trying to analyze the relations between words and things, in order to sift out what corresponds to reality and what corresponds merely to a passing fashion, we shall try to define the components of the major themes already mentioned. Thus we shall consider, in turn, the new audience, the teacher ; the new producer, the new materials, and, of course, the new systems.

2. The new audience

Several converging factors seem to explain the growing role ascribed to the audience in communication, information, education and culture : the general development of the humanistic studies, a better knowledge of mass phenomena, the role given to feedback possibilities, the improvement of evaluation techniques, and the desire to give priority to the receiver of the broadcast rather than its sender. To which may be added the explicit desire of many viewers and listeners to have an active responsability in communications systems - in other words, to participate.

Hence the very notion of an audience is gradually losing its general and abstract character. It is no longer merely a sign in the equations drawn up by theorists, but is becoming more concrete and also more diversified. In the report he prepared for the European Conference of Ministers of Culture organized by Unesco in Helsinki in July, 1972, Mr. Pierre Moulinier pointed out : " The notion of 'population' is substituted for the more generally used term 'audience' : means of cultural action are applied with a view to reaching a concrete segment of the population (whether it be a social group, a neighborhood, a village or a region)."

Specialists no longer speak of "the audience", but of many audiences, more and more differentiated. "The differentiation may result from age, socio-professional activities, leisure activities or cultures ; it should tend, on the one hand, to make the messages more specific, and, on the other hand, to put the various groups in communication with one another. It should also help to palliate the cultural leveling carried out by the mass media in our society." (D. Populus, "Teledistribution and cultural Policy").

This double trend, which tends to alleviate both the harm done by reducing the public to a common denominator and the ill effects of segregation into castes, may operate independently of the numerical importance of the audience. The isolated individual is also an audience capable of receiving messages composed especially for him.

Furthermore, these various audiences may change. Marketing and advertising specialists know this phenomenon well. Some lines of separation disappear and new groups arise. The phenomenon of adaptation of the media creates new situations in itself. The disappearance of TEVEC leaves certain needs unfulfilled. New leaders arose with the coming of the community network to Normandin. The setting up off a new circuit brings on a new temporal development, and this development, and this development is very rapid. For the past twenty years, novelists and essayists have been making pessimistic predictions based on the assumption that the public is fundamentally passive. Yet now we see a great number of needs and desires arising which express not only a demand for new messages but also a wish to produce and distribute them.

At present, few operations permit us to have a "life-size view" of these phenomena. In two years, or five years, it will be interesting to draw up a first balance sheet and see the difference between current predictions, which are often theoretical and always generous, and real achievements. The excess of information, official or private monopolies in production and distribution, the wearing away of the enthusiasm of certain audiences may arouse unforeseen attitudes. We should also be skeptical about certain modes of thought which, in forecast studies, tend to represent change by a "replacement" process. Just as the emergence

of the "cinéma vérité" has not led to the disappearance of the fictional super-production, just as television has not yet killed the film industry (or art), so it is possible that current production centers will not be replaced by the newer "electronic forums", but that the two will simply exist side by side.

When we come to the discussion of "new system", we shall see that many variants may arise between the community forum and educational and cultural self-service.

3. The new teacher

It has sometimes been pointed out that educational television is not addressed to one audience (the students), but to two audiences : the students and their teachers. However, this fact has rarely attracted the attention it deserves. So far the traditional mass media distribution system and the traditional system of teaching have been able to co-exist without difficulty ; either they ignored each other, or the audio-visual element was relegated to the status of a teaching aid, providing supplementary information from time to time, or, more often, mere illustration.

In recent years, certain achievements have shown that televised messages have a different kind of power. Tele Kolleg, the Open University, Téle-Niger bear witness in various ways to the still unexploited possibilities of the audio-visual, which can permit the setting up of remedial or distinctly novel educational systems in which the teacher or adviser intervenes only in fields where he can really excel.

Along with the traditional function of disseminating knowledge, there appears the function of facilitating access to messages. In an audio-visual context, there is less talk of the teacher than of the mediator or animateur. This change in vocabulary is not merely the reflection of a passing fad. Mr. Pierre Moulinier points out that the words "animateur" and "animation" have had a considerable vogue in France and that "all milieux, all types of activities have been affected by this terminological inflation" ; but at the same time he gives a reason for this success : "The more society becomes an anonymous mass, the more loneliness it creates, the greater its need to have fresh life breathed into it, to be given a soul, and that is the real etymological meaning of animation".

This animation function does not apply only to the field of culture, but also to that of education and training, for, when it is seen in a multi-media perspective, animation looks like one medium among others, a privilegied medium, certainly, since it essentially facilitates communication. Mr. Moulinier explains that this mediation is two-fold :

- between the message and those who receive it : it decodes the message, translates it into language suitable for the recipients, and makes it more accessible ;

- between the recipients themselves : it creates a propitious atmosphere for reception by helping them to share their difficulties and hence to solve them.

In this sense, one may say that animation increases the impact of the message to be transmitted.

This gives rise to several questions which do not seem to be foreign to the caution shown by certain teachers in their approach to the new technologies. Will the teacher's own message require a mediator, if it is to be correctly understood ? Will the teacher have to hand over his job to the mediator ? Will he have to acquire some of the animator's "know-how" ? Will he have to change completely and become an animator himself ?

The answers are not simple. The papers and explanations presented by Mr. Moulinier and Mr. Raymond Lallez make it possible to define these problems better. Speaking of the teacher (or the specialist) faced with learning communication techniques, Mr. Lallez expressed skepticism. From an adult-education point of view, he drew the portrait of an animateur, "formed by nature and by history". "The ideal mediator", he said, "would in my opinion be a person who could communicate easily with the group because of his thorough and close familiarity with it, due to his origins and his daily life, but who at the same time would be sufficiently intelligent to assimilate new ideas and new knowledge rapidly, young in spirit and open-minded enough to grasp the importance of new ideas. He would also have a strong enough personality, and strong enough social convictions, to show faith and enthusiasm in transmitting to his social partners these notions, this knowledge and these ideas." Mr. Moulinier explained : "Animation, as such, cannot be said to exist. Animation is not an aim, but

a series of steps at the service of an aim. Similarly, the animateur, as such, does not exist ; what do exist are tasks which imply animation.*

It should be noted that everything which has just been summarized here applies essentially to the role of the new mediator in adult education or cultural animation. The question aroused far less discussion from a school or university point of view ; and, outside of a few allusions to the Open University or Télé-Niger, no attempt was made to define the role of the "new teacher" by distinguishing between those functions which he might or should carry out himself and those which he might or should leave to the machine, or by specifying the possibilities or the limitations of the latter. (In this connection, it is significant that, among all the material presented, only one item might be classified as an "autonomous teaching massage", in other words, a message not requiring presentation by a teacher or specialized mediator. This item was an English broadcast presented by the Bayerische Rundfunk (the Bavarian radio network).

At the end of the discussions, the word animateur was the subject of a comment by Mr. Bates, who, as an English-speaker, distinguished three possible meanings. One of these is the initiator of an idea to be communicated. Such a person may be a teacher, a television producer, an artist, a group or an individual. Another meaning applies to persons in charge of adapting the idea to video form, from the artistic and technical point of view : the producer, the director, the technician, etc. A third meaning applies to persons who use existing video material, or material created by someone else, to contribute to the dissemination of their own ideas, for example, a classroom teacher who uses video as one of several information media. It is important to make these distinctions as, clearly, a single person or a group could fulfil all three functions.

4. The new producer

Reflection and experience permit us to form a more precise image of the new creator of messages. Already, this new creator exists in various countries ; he may be an author, a producer or an artisan ; he may be an individual or part of a team. Since the terminology in this field is quite inadequate (in fact, a new audio-visual perspective ought to give rise to new terms), we shall speak here of the producer, trying in each case to furnish the necessary explanations.

In a general way, it seems possible to describe a new producer as a person who chooses this kind of activity less because he wants to work in television than because he has something to express, to communicate, to exchange. This fundamental attitude seems to distinguish him better from producers in traditional systems than would any distinction based on specialized diplomas, past professional experience, institutional connections, or content of the messages produced. To be convinced of this, it is enough to think of the many producers for whom the making of an educational broadcast is just one job among others, and to reflect on the cases of the Canadian film and television professionals who have been attracted by the videographe in the same way as many amateurs have been.

From this point of view, the producer becomes also a professional animator. "Since communication structures have been greatly changed, the profile of communication specialists will also be changed, and already the need for a new kind of producer-animator is felt", writes Mr. Daniel Populus , who explains : "He will have to put his familiarity with audio-visual language at the service of communication within the community, to train consumers to become producers themselves, and to integrate himself into the various groups concerned with community educational and socio-cultural work. He will be obliged to commit himself personally to a search for a form of audio-visual writing that will be adapted to the aims of such networks."

Mr. Raymond Ravar, for his part, believes that the new system will require "people skilled in the art of establishing real contacts with men and groups, artists in the art of communication. One single type of individual ? Certainly not. For relays can - must - be made. Artists is a communication circuit, with feedbacks as powerful as the source. Artist-animator-educators,

for whom a message (a complete communications circuit) is not the same thing as a work. Their faculties of interpersonal relations will be developed to the maximum .... The artist (must) have the intuitions of the socio-cultural animateur, and the animateur must have those of the artist. However, the animateur must seek to discover others more than to discover himself ..."

Thus it can be seen how the image of the new producer differs from a certain traditional image of the artist as an unique and isolated creator, who gives his work to the public only under the effect of inspiration. Does this mean, as some have said, that we are going to witness "the death of Orson Welles", the end of a certain type of "audience-oriented" film (and television) ? By no means ; this kind of creator (who is rare !) cannot be threatened by the coming of new techniques (indeed, he may make excellent use of them). What we shall see, rather, is the demystification of certain attitudes and the abandonment of a certain stereotype of the creator, a stereotype which was taken over by the cinema, then by television, from the start and which has been responsible for a general tendency to remain aloof from audiences, looked down upon as amateurs. Furthermore, as applied to the audio-visual field, this stereotype is an ambigous one, since here the creator is always torn between art and technique, inspiration and "professionalism". The use of these media almost exclusively for entertainment, the requirements of business and the "star" system have inflated the phenomenon. The advent of new video techniques, flexible and available to the many, may deflate it to its true dimensions and lead to a realization that in the audio-visual field as in others "the mason must not be mistaken for the architect". Where the videographe is concerned, this prudence is shown by the use of the term "artisan". In his paper on the videodisc process, Mr. Raymond Ravar says : "We believe that during the first stage the creator-producer will be somewhat the same kind of mediator as is the journalist or publicity man." Now the journalist and the publicity man are concerned first of all with good communication, which does not at all exclude esthetic concerns.

In the same way, it would be a mistake to think that the new techniques are going to do away with professionalism, to lead to the disappearance of the technician. On the contrary, they are going to multiply technical specialities, precisely in order to open the gates of production to as many people as possible. It is

an over-simplification, and, in extreme case, false, to oppose amateurism to professionalism, for this latter term covers both the ability to utilize the rules or tricks of audio-visual expression and the ability to maintain and make maximum use of technical equipment. If any kind of professionalism is liable to disappear, it is the first and not the second.

Furthermore, a third type of professionalism might appear. Its practitioners would assist the new mediators mentioned above to make maximum use of video materials and might even provide training in the integration of these techniques into official curricula of study on the same basis as reading and writing.

It would be vain to try to define the profile of "the" new producer, for his function will really correspond to several profiles, according to the mode of production. Production varies according to the type of document involved (and we shall see that great diversity is possible), according to the means used, and according to the manner in which it is carried out. Production by small teams, clubs or groups, which already characterizes the "underground" cinema and "parallel" television, can only develop further, thanks to the new video. These teams may include half a dozen versatile members, whose job change for every production ; or, on the contrary, the responsabilities may be distributed according to each person's abilities, through an entirely different type of organization from what which prevails in traditional film or television. The working methods of some advertising teams may help us to imagine this new type of production, in which a great share in creation is given to the photographer, the layout specialist and the designer, under the leadership of an author and an art director. The role of this latter specialist is little known outside the profession, but it should be carefully studied by anyone interested in the new type of audio-visual creation.

Along with team-production another important element appears : anonymity. The stereotype of the traditional creator is based on an individualistic view of production ; the work is signed and always remains, in a way, its author's property. The painter signs his picture ; the credit lines which accompany an audio-visual work explain the role and ranks of the principal persons involved in the production, according to a very strict

protocol.But the versatility of the members of the new teams, the exchanges made among video clubs, the unlimited possibilities for copying or re-editing are exploding the traditional notion of an author. Names of groups are tending to be substituted for individual signatures. Sometimes these names refer less to groups than to trends, to forms of social, cultural or esthetic commitment. "Free television"; "Freaks", "Slon", "Guerilla Television", "Radical Software" are less signatures than labels. Hence the need for revising our ideas about authors' rights, and copyright law, in this field. A movement for such revision, started by video firms; is developing in the same direction as requests for the use of education satellites, with the difference that, where video is concerned, the movement is not limited to educational material. This means that changes might be made which would amount to a basic transformation. Unesco has already proposed the study of these questions. Study should not be limited, however, to their legal aspects : the preparation of public opinion for such changes should also be considered.

5. The new document

It may be considered that in an initial stage the new video production techniques (flexible and inexpensive) and the new means of distribution (video-theatres or cable, which bring the production "nearer the audience") constitute a remarkable return to the sources of television. Once more they put a premium on rapid production, continuity recording, instantaneous invention, the risk inherent in innovation, and, in a general way, all the virtues of live broadcasting as opposed to the formal perfection of a document carefully edited beforehand. So a good many video clubs are reviving the experience of the first production centers, twenty or thirty years ago. Similarly, light video techniques provide solutions for most of the problems encountered ten years ago by the practitioners of the "cinéma vérité" : really miniaturized equipment, perfect synchronization of picture and sound, and the possibility of making long recordings at small cost (tape can be erased and used again, whereas film can be exposed only once).

This means that all kinds of "on the spot" documents can be made in greatly increased numbers : reports, psychological surveys, sociological or ethnographic investigations. "Cinéma vérité" and "camera writing" may get their second wind, whether they are trying to produce finished works or merely essays or informational material.

Mr. Raymond Ravar distinguishes two aims in this production-creation :

. "a durable cultural object which should be distributed as widely as possible and over as long a period of time as possible. The message for EVR or Selectavision is comparable to film (whether the film is made by photo-cinematographie processes or by video) ;

. "a transitory cultural object which may be kept or destroyed and made over (light equipment for picture and sound recording, used with a cassette system).

In the first case the use made of the message tends to lead to standardization (even in an animation situation).

In the second case, this may still be true, but circumstances are likely to produce a contrary effect - in other words, to lead to the greatest possible diversity of uses ..."

"The first kind of use corresponds to profiles of creator-producers of types that have become relatively traditional (in film or video)."

"Rather than the creator-producer of a message with a high informational content, carefully structured, our second type of person will be the maker of small groups of information units, of varied forms but all as adaptable as possible to the most diverse situations or socio-cultural objects. The works will be essays, constantly remodeled, replaced, picked up as relays or inserted (through multi-media techniques) into extremely varied contexts."

Will this new kind of document use a new kind of language for communication ? Mr. Herbert Marchl, starting from an analysis of the aims of the educational image, stresses the need for working out, beforehand, a real definition of the aims sought. "Since the image should be chosen and produced in accordance with the desired educational and cultural objectives, it follows that these objectives should be defined. In what terms ?" It does not seem that the use of the new techniques requires any particular mode of expression or is leading to the rise of new modes of expression that are radically different from those used so far by film and television. It remains possible, however, that the extension of the means of creation may permit the flowering of modes which, so far, have been confined to the experimental sectors. It would be useless and perhaps dangerous to try to set up definitions in this field. Such an attitude might tend to hamper innovation in the name of the kind of the kind of esthetic "metaphysics" shown in such negative judgments as : "That's not film", or "That's not television". What use would it be to say : "That's not video" ? And on what criteria could such a judgment be based ?

It seems that the change is affecting less the mode of expression than the system of communication ; and the discussions aroused by Mr. Marchl's paper led back to the problem of the forms and structures of audio-visual teaching material. The debate dealt less with the opposition between the video document as a faithful mirror of experienced time and the document that creates artificial time because of the way it is edited than with such questions as the freeing of the image from a cultural connotation, the control of messages, and the adaptation of messages to smaller or larger audiences.

6. Toward new systems

While little was said about new forms of expression, and still less about new contents, various video systems were discussed. The number of parameters taken into consideration makes predictions difficult, and, at an extreme, shows that the word "video" is too general. It may soon undergo a fate similar to that of "audio-visual". Several factors should be taken into consideration :

1) Degree of dependance on a heavy industrial system. Some processes are not profitable unless a minimum number of copies is made. Even if this number is small, the decision to produce is linked to a market study involving an estimate of the potential audience and also of the reading equipment needed. This means, a priori, that flexibility of adaptation suffers : contents with a high proportion of generalities tend to be chosen, and "hardware" must be taken into consideration. Hence such processes tend to be used more for entertainment than for education.

2) The degree of institutionalization. This is a question of the degree to which the new systems are dependent on pre-existing systems : public or private radio-television networks, governmental bodies, educational authorities. To which should be added the degree of novelty of the legal status of these future systems. In most countries, laws concerning the creation and dissemination of audio-visual messages make it very difficult, if not impossible, to set up really new types of systems. The legal status of a collective function remains to be invented. And such invention is all the more difficult because, in almost all cases, institutionalization goes along with a static point of view. It is not by chance that the videographe was able to get headquarters in Montreal : it was set up thanks to the Canadian National Film Office, a body whose role as an innovator in the audio-visual field is well known.

3) The degree of collectivization of the body concerned. Collective creation, audience-participation in programming and the coming of the producer-consumer, these questions were brought up constantly during the discussions. Anyone who has ever taken part in real teamwork knows how hard the job is, especially in the audio-visual field. The pioneer character of the enterprises that have succeeded so far makes extrapolation very difficult. Can videographs be set up in many countries ? Every participant asked himself this question, thinking of his own country. In addition to the differences in context and in audio-visual history which handicap such operations from the start, two major difficulties should be taken into consideration : the length of time during which the team can function well and the gradual wearing down of the

creative drive. We still know very little about the methods and conditions of work in groups devoted to collective creation. We can only note that in most cases the group breaks up after two or three years because of internal tensions. But on the other hand, if it does stick together, this almost always at the price of a drop in creativity due to the setting up of a kind of orthodoxy and a gradual slipping into neo-conformity. Inventiveness gives way to the use of recipes, to the search for a dogma. The "élitist" habits already mentioned do not facilitate the harmonious development of these groups, which are often used by individuals as springboards toward personal success.

4) The amount of choice provided by each new system. During the discussions which followed the presentation of a model of a system of audiovisual "self-service" in the educational field, Mr. Zygulski warned participants against the ambiguity of the very notion of self-service and asked them to reflect on the nature of the choice implied by such a system. Here the individual can exercise his faculty of choice only within a pre-established, and necessarily limited, range of possibilities. Is it really liberation to go from a system devoid of choice to a system that permits choice but limits it at the same time ? On the contrary, does such a change not really conceal subtle and hence dangerous possibilities of alienation ?

5) The possibility of choice among various systems. Reflection on the nature of individual choice, and on the contradiction between an apparent liberalism in education and the massive and sophisticated systems of production and distribution that have so far been the rule, led to a different formulation of the problem. A situation may be imagined in which people are offered so much choice that, in Mr. Adelson's words, "they hardly have time to choose." The question of guidance then arises. "There are cases where people must be helped to choose." Which implies two things : first, that the choice is not made within a single system but between a number of systems (a problem already noted by Mrs. Vatsyayan when she pointed out that the Open University could not answer all the demands of the students) ; and, second, that the question of guidance has to be solved.

How can efficient arrangements be worked out in this field ? "Is there a way to protect me against people who want to protect me ?" Mr. Bates asked. It appears that the question cannot be answered easily if it is looked at from a purely theoretical, and necessarily simplified, point of view. Looking at the concrete problems of professional training explained by Mr. Patin, and considering the coming of cassettes (concerning which no system has been developed in this field so far), Mr. Birkrem recalled certain aspects of the use of film slides. For a time; these slides poured in unchecked to swell the files. But later, after hearing comments from the users, a good many educational authorities set up systems of control, approval or classification that made it possible to provide helpful guidance to users. The application of systems of approval or evaluation to the various future "self-services" is certainly one of the solutions of the problem.

CONCLUSION

In the opinion of all the participants, the Vichy seminar raised more questions than it answered, and talked more about original systems than it succeeded in defining the originality of video itself. This is hardly surprising, considering the novelty of the subject and the gap between the broad concerns of the participants and the small number of concrete current operations available for use as examples. Nor is it surprising that the discussion veered frequently between a consideration of good means of communication and a consideration of the aims of communication. For the debates on the "auto-video" theme dealt with the development of a new ingredient in the chemistry of modern communications, whose components are light recording equipment, cassettes, and cable. The addition of these components in certain doses may lead to a really explosive mixture. Hence it was to be expected that questions would be raised both as to problems of use and as to problems of dose. In this sense, the discussions that took place during the "auto-video" seminar led to a new way of looking at communication, in which ethics are more important than esthetics or pedagogy. They also clearly raised the question of the transfer of experiences, and that of the conditions under which new educational systems can exist. It was often pointed out that certain highly original experiments could have been carried out, in fact, ten or fifteen years sooner. It is useful to reflect on the causes of such delays. And no less useful to try to discern, today, what systems would now be feasible and which, among the range of possibilities, would be real innovations. These are difficult but necessary tasks, for, as the futurologist pointed out, "we must not believe that what has been done is all that can be done."

Proposal ware made dealing with :

1) The circulation of information with the aim of ensuring continuing contacts among participants and the collection of information on operations and research, especially from the point of view of the democratization of technology. The Agency for Cultural and Technical Cooperation proposed to set up a file on this subject.

2) The undertaking of research concerning :

. the various processes which, in each country, are likely to permit the use of the media to promote educational and cultural development. (This research would be followed by studies dealing with practical ways of carrying out operations).

. an in-depth study of the conditions under which four or five existing operations were developed and function ;

. the setting up and comparative study of "self-service" systems in developing countries and in countries which are technically well-equipped ;

. a systematic study of the setting up of multi-media systems ;

. a comparative study of the consequences of the use of video technologies for education and culture in countries having different socio-economic structures.

3) The holding of future seminars on the development of the problematics brought out during the "auto-video" seminar.

ANNEXES

Annex I

LIST OF PARTICIPANTS

M. Marvin ADELSON
Professor of architecture and urban planning, University of California
LOS ANGELES, California 90024 — *U.S.A.*

M. Anthony BATES
Lecturer in media research methods
The Open University
Institute of Educational technology
Walton Hall, Walton
BLETCHLEY, Buckinghamshire — *Great Britain*

M. Normand CLOUTIER
Agent d'information
Ministère des Communications
Gouvernement du Québec
Bureau du Sous-Ministre
Hôtel du Gouvernement, QUEBEC — *Canada*

M. Max EGLY
Directeur du programme audio-visuel et pédagogique
Agence de coopération culturelle et technique
170 rue de Grenelle
75007 PARIS — *France*

M. Raymond LALLEZ
Directeur des Centres pédagogiques
Ecole normale supérieure de
92210 SAINT-CLOUD — *France*

M. Gérard LAPOINTE
Délégation générale du Québec
66 rue Pergolèse
75116 PARIS — *France*

M. Herbert MARCHL
Expert auprès du Ministre de
l'Education nationale de Côte-d'Ivoire
pour l'évaluation du programme
d'éducation télévisuelle
B.P. 2053
BOUAKE — *Ivory Coast*

M. Pierre MOULINIER
Service des Etudes et Recherches
Ministère des Affaires culturelles
3 rue de Valois
75001 PARIS — *France*

M. Jacques PATIN
Conseiller technique en formation
professionnelle
Sous-direction de la formation
professionnelle
Ministère du Travail, de l'Emploi
et de la Population
1 place de Fontenoy
75007 PARIS — *France*

M. Daniel POPULUS
Coordinateur du projet du Centre
audio-visuel
Groupe animation de la Villeneuve
de Grenoble
171 rue de Stalingrad
38000 GRENOBLE — *France*

M. Raymond RAVAR
Directeur de l'Institut national
supérieur des arts du spectacle et
techniques de diffusion (INSAS)
54 rue de Namur
1000 BRUXELLES — *Belgium*

M. Gabriel SEVIN
Responsable du groupe de recherche
et d'appui pédagogiques (GRAP)
Bureau pour le développement de la
production agricole (BDPA)
202 rue de la Croix-Nivert
75015 PARIS — *France*

M. Jean VALERIEN
Chef du Département des actions éducatives
Office français des techniques modernes d'éducation (OFRATEM)
29 rue d'Ulm
75005 PARIS — *France*

Dr Kapila VATSYAYAN
(Mme)
Cultural Affairs Division
Department of Culture
NEW-DELHI — *India*

M. Kazimierz ZYGULSKI
Professeur de l'Académie polonaise des sciences,
Chef de la Section des changements dans la culture de la société polonaise
Institut de philosophie et de sociologie de l'Académie polonaise
72 rue Nowy Swiat
Palac Staszica
VARSOVIE — *Poland*

M. H. BIRKREM
Division des moyens d'enseignements
Organisation des Nations-Unies pour l'Education, la Science et la Culture
UNESCO
Place de Fontenoy
75007 PARIS — *France*

Mlle Ginette CAMBROUZE
Agence de Coopération culturelle et technique
170 rue de Grenelle
75007 PARIS — *France*

M. Terry HUGUES
International Broadcast Institute
Tavistock House East,
Woburn Walk, Tavistock Square
LONDON, WCIH 9 LG — *Great Britain*

M. Francis BARBEDOR
Groupe d'appui technique (GAT)
Secrétariat d'Etat aux Affaires étrangères
20 rue Monsieur
75007 PARIS — *France*

M. Pierre RAMBAUD
Office de Radio-télévision française
Direction des Affaires extérieures et de la coopération
78 rue Olivier de Serres
75015 PARIS — *France*

M. Bernard PLANQUE
Centre d'information sur les techniques d'enseignement (CITE)
5 quai aux Fleurs
75004 PARIS — *France*

Mlle Evelyne PIERRE
Membre de l'expérience télé-Niger
8 rue de Pontoise
75005 PARIS — *France*

M. André FRESNEL
Chargé d'études
Association pour le développement de la promotion sociale en Bretagne
7 place de Bretagne
35000 RENNES — *France*

Secretary's office and Organisation

M. Pierre LESUEUR

Mme Christiane DESPRAIRIES

Commission française pour l'Unesco
21 bis rue La Pérouse
75116 PARIS — *France*

WORKING DOCUMENTS

72.VAV.Bibl.1	*Projet de centre de création audio-visuelle, Villeneuve de Grenoble.* Daniel Populus
72.VAV.Bibl.2	*Le projet "Delta".* Radiodiffusion télévision suèdoise
72.VAV.Bibl.3	*Compte-rendu de l'expérience télé-Niger.* Max Egly
72.VAV.Bibl.4	*Le rôle de l'enseignant dans un système de vidéo-enseignement.* Anthony Bates
72.VAV.Bibl.4e	*The role of the teacher in a video teaching system.* Anthony Bates
72.VAV.Bibl.5	*Télédistribution et politique culturelle.* Daniel Populus
72.VAV.Bibl.6	*L'Institut de technologie de Mostaganem.* Gabriel Sevin
72.VAV.Bibl.7	*Vers un libre service éducatif et culturel.* Jean Valérien
72.VAV.Bibl.7e	*Towards an educational and cultural self service.* Jean Valérien
72.VAV.Bibl.8	*Régime juridique des émissions de télévision actuellement en vigueur en France.*
72.VAV.Bibl.9e	*Description of the Open University.* Anthony Bates
72.VAV.Bibl.10	*Originalité de la production vidéo dans une optique multi media.* Herbert Marchl
72.VAV.Bibl.11	*Le nouveau profil des créateurs-producteurs.* Raymond Ravar
72.VAV.Bibl.12	*Le vidéographe.* Normand Cloutier
72.VAV.Bibl.13e	*At the crossroad of decision* article de Marvin Adelson paru dans *Information technology - Some critical implications for decision makers* - 1972 the conference Board, inc. New York

Annex III

BIBLIOGRAPHY

I - EDUCATION AND SOCIETY :

Critical analysis of training and learning centers and proposals for the creation of new educational structures (open school system, schools and communities centers, ...).

. ACKERMANN (W.) et DULONG (R.) - *La diffusion des connaissances scientifiques*. - In : *Revue française de sociologie*, n° 3, juillet-septembre 1971. Pp. 378-405.

Animation (l') socio-culturelle. - In : *Cahiers Jeb*, n°3 septembre 1971. Pp. 137-231.

Animatique (L') . *Panorama de l'animation sociale, culturelle, commerciale, pastorale, politique*. In : *Pour*, n° 18/19, mars 1971. 133p.

. BESNARD (P.) - *Recherche sur les conditionnements et fondements sociologiques du système éducatif à partir de l'analyse des dominantes du développement social et culturel de la société française actuelle*. - In : *Bulletin de psychologie*, 1968-1969, n° 18-19. Pp. 1111-1132.

BOYLE (E.), CROSLAND (A.) - *The politics of education*. Harmondsworth, Middx., Penguin Books Ldt, 1971. 50p.

BURDOWICZ-NOWICKA (M.) - *Rola telewizji w nauczaniu. (Le rôle de la télévision dans l'enseignement)*. Ossolineum, Wroclaw-Varsovie-Krakow, 1965. 179 p.

. *Centres (Les) de promotion collective. Alternatives en éducation. Projet éducatif.* - In: *Orientations*, n° 39, juillet 1971. 128 p.

CITRON (S.) - *L'école bloquée* - Paris, Bordas, 1971. 165 p.

Connaître les bonnes pages de l'éducation permanente. In : *Pour*, n° 21-22, juillet 1971. 152 p.

. FANTINI (M.D.), YOUNG (M.A.) - *Designing education for to-morrow's cities*, New York and London, Holt, Rinehart and Winston, Inc., 1961.

FLUQUET (M.) et STRASFOGEL (S.) - *L'audio-visuel au service de la formation des enseignants - le circuit fermé de télévision*. Paris, 1972. Delagrave. 263 p.

FLEMING (E.) - *Przezrocze, film i telewizja w szkole. La transparence, le film et la télévision à l'école.* Varsovie, 1961.

. GAUTHIER (G.), PICARD (P.) - *Télévision passive, Télévision active*. Coll. "Tema communications" - Tema Editions Paris, 1972.

GOODMAN (P.) - *Compulsory miseducation.* - Harmondsworth, Middx., Penguin Books Ldt., 1971. 40 p.

GREEN (Th.F.) - *Schools and communities : a look forward.* In : *Harward educational Review*, n° 2, spring 1969. Pp. 221-252.

. HASSENFORDER (J.) - *Une innovation américaine : l'Enseignement sans école*.Paris, I.N.R.D.P., Service des Etudes et Recherches pédagogiques, section Documentaire, 1971. 3p.

HASSENFORDER (J.) - *Une stratégie de changement.* - In: *L'Education*, 10 juin 1971. Pp. 15-16.

. ILLICH (I.) - *Libérer l'avenir. Appel à une révolution des institutions*. Paris, Editions du Seuil, 1971. 190 p.

ILLICH (I.) - *Une société sans école*. Paris, Editions du Seuil, 1971. 192 p.

. JANNE (H.) - *Accès à l'enseignement supérieur en Europe. Section 5 : Fin des méthodes traditionnelles à tous les niveaux*. Conférence des Ministres de l'Education, Vienne, novembre 1967.

JOHNSON (N.) - *How to talk back to your television set*. Bantan Books. New York, 1970.

. KOMOROWSKA (J.) - *Telewizja w zyciu dzieci i mlodziezy. (La télévision dans la vie des enfants et des jeunes)*. Panstwowe Wydawnictwa Naukowe, Varsovie, 1ère partie 1963, 2ème partie 1964.
1ère partie 132 p. 2ème partie 109 p.

. LALLEZ (R.) - *Le cas Tevec : une expérience d'éducation des adultes par système multi media*.
Coll. "Expériences et innovations en éducation" n° 1 - Unesco - B.I.E. Paris 1972. 66 p.

. MARTIN (R.) - *Utilisation de matériel audio-visuel (circuit fermé de télévision) dans le cadre de la formation d'étudiants en psychologie*. - In : *Bulletin de psychologie*, 269, vol. XXV, 5-7 1971-1972.

MERTENS (J.) - *L'emploi de la radio et de la télévision dans la formation des maîtres*. Institut de l'Unesco pour l'Education. Hambourg 1970.

MORGAN, Dr. Roger (P.) - *The new communications technology and its social implications*. A symposium at Ditchley Park, Oxfordshire, November 2-7 1970. International Broadcast Institute Rome, 1971.

. NEWMAN (F.M.), OLIVER (D.W.) - *Education an Community.* In : *Harward educational review*, n° 1 Winter 1967. Pp. 61-106.

. PAGES (J.C.) - *Du "libre service" à la relation humaine améliorée.* In : *Media*, n° 23-24, octobre-novembre 1971. Pp. 68-70.

Participation (La) sociale. Les animateurs. - In : *Pour* n° 20. 1971.

POMONTI (J.C.) - *Vers une société cablée.* - In : *Preuves* n° 8 octobre 1972. Pp. 101-102 Paris.

. REIMER (E.) - *School is dead* - Hardmondsworth, Middx., Penguin Books Ldt., 1971. 40 p.

. SCHWARTZ (B.) - *Pour une éducation permanente.* - In : *Education permanente*, n° 1 mars 1969. Pp. 68-86.

SCUPHAM (J.) - *The Open University*. International Broadcast Institute, London 1972.

Syndicats (Les) ouvriers et la formation. - : *Education permanente*, n° 11 juillet-août- septembre 1971. 127 p.

. *Two schools innovate to stay in the black.* - In : *Business Week*, october 30, 1971.

Techniques éducationnelles et recherche pédagogique. - In : *Les sciences de l'éducation*, n° 3 juillet-septembre 1971, Didier ed. Paris

. VEXLIARD (A.) - *Système et non-système d'éducation.* In : *Revue française de pédagogie*, n° 8, juillet-août 1969. Pp. 5-11.

. WANIEWICZ (I.) - *La radio-télévision au service de l'éducation des adultes - Les leçons de l'expérience mondiale*. Unesco, Paris 1972. 131 p. bibliographie.

. ZYGULSKI (K.) - Etude polono-française. *Le rôle de la culture dans l'utilisation des loisirs*. Institut de Philosophie et de Sociologie, Varsovie, 1968. 283 p.

ZYGULSKI (K.) - *Obraz i slowo w kulturze masowe j. (L'image et le mot dans la culture de masse)*. Varsovie, 1963. - In : *Kultura i Spoleczenstwo* n° 2, Pp. 171-189.

ZYGULSKI (K.) - *Wstep do zaga dmen kultury / Introduction aux problèmes de la culture /* Instytut wydawniczy CRZZ Varsovie, 1972. 376 p.

II - TECHNOLOGY, EDUCATION AND SOCIETY :

Estimates, prospects and planning for effective utilisations of technology in education.

. ANDERSON (C.A.) - *Le contexte social de la planification*. Unesco, Paris 1968, 41 p.

. BATZ (J.C.) - *La vidéocassette*. - Comité de l'éducation extra-scolaire et du développement culturel, Conseil de l'Europe, Strasbourg. 1972. 31 p.

BERETTA ANGUISSOLA (L.) - *Les cassettes audio-visuelles : perspectives en Europe*, Conseil de l'Europe, Comité de l'éducation extra-scolaire et de développement culturel, Strasbourg, 1972. 14 p.

BEZENCON (M.) - *A propos d'un satellite européen - problèmes et perspectives*. Conseil de l'Europe, Comité de l'éducation extra-scolaire et de développement culturel, Strasbourg, 1972. 14 p.

BROUDY (H.S.) - *Some potentials and hazards of educational technology*. - In : *Designing education for the future*, n° 6 - *Planning for effective utilisation of technology in education*. Edited by E.L. MORPHET and D.L. JESSER, New-York, Citation Press, 1969, Pp. 92-113.

BRZEZINSKI (Z.) - *La révolution technétronique* - Paris, Calman-Léby, 1971. 388 p.

BRUCE (J.) - *Alternative models for education* - Waltham, Massachussets Blaidsdell - Publishing Co. 1968.

. COLEMAN (J.) - *Education in the age of computers and mass communications* - décembre 1969, ronéoté.
Mentionné dans *Information et Documents*, n° 303, mars 1971. p. 19.

COMMISSION NATIONALE JAPONAISE POUR L'UNESCO - *L'utilisation de moyens modernes de communication dans l'éducation des adultes*. Tokyo, 1972. 31 p.

Conseil international de moyens d'enseignements (C.I.M.E.)
Congrès international organisé à Tunis sous le haut patronnage de l'Unesco - 29-30-31 mai 1972.

Exposés introductifs de :

ALLEBECK (S.) - *Rénovation des systèmes éducatifs par les nouveaux moyens et méthodes.*

EGLI (M.) - *Problèmes posés par le transfert du Software d'un pays à l'autre.*

HYER (R.) - *Stratégie de l'introduction de l'innovation dans les systèmes éducatifs grâce à l'usage de nouveaux moyens.*

LEFRANC (R.) - *Rénovation de la formation des maîtres par les nouveaux moyens.*

OULDALI (B.) - *Rénovation de l'éducation des adultes par les nouveaux moyens.*

Les textes de ces exposés et un résumé en anglais ont été publiés dans la revue *Educational Media International* n° 14 1972, Londres.

La revue *Media* publiée par l'I.N.R.D.P. publiera ces exposés en français au cours de 1973.

. *Designing Education for the future* (n° 5). *Emerging designs for education*. Edited by E.L. Morphet et D.L. Jesser. New York, Citation Press, 1969. 312 p.

. *Environment for man : the next 50 years*. Edited by W.R. Ewald. Jr., Bloomington, Indiana University Press, 1967.

. *Environment and policy : the next 50 years*. Edited by W.R. Ewald. Jr., Bloomington. Indiana University Press, 1968.

Environment and change : the next 50 years. Edited by W.R. Ewald. Jr., Bloomington. Indiana University Press, 1968.

. FRANCOIS (A.) - *Problèmes de production des programmes destinés aux cassettes*, Conseil de l'Europe, Comité de l'éducation extra-scolaire et du développement culturel, Strasbourg, 1972.

FONDATION POUR LE DEVELOPPEMENT CULTUREL - *La prévision en technologie culturelle*, Conseil de l'Europe, Comité de l'éducation extra-scolaire et du développement culturel, Strasbourg, 1972.

FONDATION POUR LE DEVELOPPEMENT CULTUREL - *Réflexions sur une production de télévision par et pour des communautés restreintes*, Conseil de l'Europe, Comité de l'éducation extra-scolaire et du développement culturel, Strasbourg, 1972.

. GROOMBRIDGE (B.) - *Television and the People. A program for Democratic Participation*. Hardmondsworth, Middx., Penguin Books Ldt. 1972. 254 p.

. KNOLL (J.H.) - *Information et délassement par les moyens audio-visuels*, Conseil de l'Europe, Comité de l'éducation extra-scolaire et du développement culturel, Strasbourg, 1972.

. LEFRANC (R.) - *Usages culturels d'un satellite européen avec stations réceptrices*. Conseil de l'Europe, Comité de l'éducation extra-scolaire et du développement culturel, Strasbourg 1972. 22 p.

. MADDISON (J.) - *New trends in educational technology and industrial pedagogy*. Centre technique audio-visuel, Antwerpen, 1971.

MAGNUS (U.) - *Aspects futurs de la société et des mass media en Europe*. Conseil de l'Europe, Comité de l'éducation extra-scolaire et du développement culturel. Strasbourg, 1972. 24 p.

COMMISSION NATIONALE JAPONAISE POUR L'UNESCO - *L'utilisation de moyens modernes de communication dans l'éducation des adultes*. Tokyo, 1972. 31 p.

Conseil international de moyens d'enseignements (C.I.M.E.) Congrès international organisé à Tunis sous le haut patronnage de l'Unesco - 29-30-31 mai 1972.

Exposés introductifs de :

ALLEBECK (S.) - *Rénovation des systèmes éducatifs par les nouveaux moyens et méthodes.*

EGLY (M.) - *Problèmes posés par le transfert du Software d'un pays à l'autre.*

HYER (R.) - *Stratégie de l'introduction de l'innovation dans les systèmes éducatifs grâce à l'usage de nouveaux moyens.*

LEFRANC (R.) - *Rénovation de la formation des maîtres par les nouveaux moyens.*

OULDALI (B.) - *Rénovation de l'éducation des adultes par les nouveaux moyens.*

Les textes de ces exposés et un résumé en anglais ont été publiés dans la revue *Educational Media International* n° 14 1972, Londres.

La revue *Media* publiée par l'I.N.R.D.P. publiera ces exposés en français au cours de 1973.

. *Designing Education for the future* (n° 5). *Emerging designs for education*. Edited by E.L. Morphet et D.L. Jesser. New York, Citation Press, 1969. 312 p.

. *Environment for man : the next 50 years*. Edited by W.R. Ewald. Jr., Bloomington, Indiana University Press, 1967.

. *Environment and policy : the next 50 years*. Edited by W.R. Ewald. Jr., Bloomington. Indiana University Press, 1968.

Environment and change : the next 50 years. Edited by W.R. Ewald. Jr., Bloomington. Indiana University Press, 1968.

. FRANCOIS (A.) - *Problèmes de production des programmes destinés aux cassettes*, Conseil de l'Europe, Comité de l'éducation extra-scolaire et du développement culturel, Strasbourg, 1972.

FONDATION POUR LE DEVELOPPEMENT CULTUREL - *La prévision en technologie culturelle*, Conseil de l'Europe, Comité de l'éducation extra-scolaire et du développement culturel, Strasbourg, 1972.

FONDATION POUR LE DEVELOPPEMENT CULTUREL - *Réflexions sur une production de télévision par et pour des communautés restreintes*, Conseil de l'Europe, Comité de l'éducation extra-scolaire et du développement culturel, Strasbourg, 1972.

. GROOMBRIDGE (B.) - *Television and the People. A program for Democratic Participation*. Hardmondsworth, Middx., Penguin Books Ldt. 1972. 254 p.

. KNOLL (J.H.) - *Information et délassement par les moyens audio-visuels*, Conseil de l'Europe, Comité de l'éducation extra-scolaire et du développement culturel, Strasbourg, 1972.

. LEFRANC (R.) - *Usages culturels d'un satellite européen avec stations réceptrices*. Conseil de l'Europe, Comité de l'éducation extra-scolaire et du développement culturel, Strasbourg 1972. 22 p.

. MADDISON (J.) - *New trends in educational technology and industrial pedagogy*. Centre technique audio-visuel, Antwerpen, 1971.

MAGNUS (U.) - *Aspects futurs de la société et des mass media en Europe*. Conseil de l'Europe, Comité de l'éducation extra-scolaire et du développement culturel. Strasbourg, 1972. 24 p.

. *On the cable, The Television of Abundance*, report of the Sloan Commission on Cable communication. New York, Mc Graw-Hill Book Company. 1971.

. PLOMAN (E.) - *La diffusion par satellite à l'intention de l'Europe*. Conseil de l'Europe, Comité de l'éducation extra-scolaire et du développement culturel, Strasbourg 1972. 38 p.

Programmes d'enseignement à partir de 1980. Organisation de coopération et de développement économiques, O.C.D.E., Paris, 1972.

. RODRIGUEZ FRAGNAS (J.L.) et GARCIA JIMENEZ (J.) - *Perspectives d'évolution de la télédistribution*, Conseil de l'Europe, Comité de l'éducation extra-scolaire et du développement culturel, Strasbourg, 1972.

. SCHAEFFER (P.) - *Evolution des réseaux de télévision de service public*, Conseil de l'Europe, Comité de l'éducation extra-scolaire et du développement culturel, Strasbourg, 1972.

SIMONS (K.) - *Nouvelles méthodes et techniques de communications audio-visuelles au service de l'éducation des adultes*. Notes préparées pour le Conseil international du cinéma et de la télévision (C.I.C.T.) - Paris - et publiées à l'occasion de la 3° conférence internationale sur l'éducation des adultes. Tokyo 25 juillet - 7 août 1972. 25 p.

Stratégies de compensation : panorama des projets d'enseignements pour les groupes défavorisés aux Etats-Unis, Organisation de coopération et de développement économiques, Paris 1971.

. TAYLOR (W.) - *Alternative futures in education*. - In : *British Journal of Educational Technology*, n° 2 may 1971. Pp 124-136.

THOVERON (G.) - *La télédistribution dans le monde d'aujourd'hui*, Conseil de l'Europe, Comité de l'éducation extra-scolaire et du développement culturel, Strasbourg, 1972. 12 p.

TRAVERS (R.M.W.) - *Directions for the development of an educational technology.* - In : *Technology and the Curriculum*, Teachers college Press, Teachers College, Columbia University, 1968. 146 p., Pp. 85-101.

. *Vues prospectives sur l'éducation permanente et sur la jeunesse.* - In : *Cahiers Jeb*, n° 5 décembre 1969. Pp. 245-340.

III - TECHNOLOGY AND INDUSTRY OF EDUCATION :

Developing accountability in instructional systems technology.

. BAGDIKIAN (Ben H.) - *The wired city. The information machines (la cité câblée)*. Harper and Row, New York 1971.

BLAKELY (R.J.) - *Shaping the Future*. - In : *Educational Broadcasting Review*, June 1971. Pp. 3-18.

BUCKINGHAM (D.J.), JONES (M.H.) - *Visual communication in Engineering science*. - In : *British Journal of educational Technology*, vol. II, n° 1, january 1971. Pp. 48-56.
Système d'enseignement au niveau d'une discipline.

. *Cassettes* - In : *Audiovisual instruction* , n° 7 september 1970. Pp. 20-49.

Centre pour la recherche et l'innovation dans l'enseignement- *La technologie de l'enseignement - Conception et mise en oeuvre de systèmes d'apprentissage*. Organisation de coopération et de développement économiques, Paris 1971. 86 p.

Conseil de la coopération culturelle - *Catalogue des documents audio-visuels pour la formation des maîtres*. Conseil de l'Europe, Strasbourg, 1970. 193p.

Conseil de la coopération culturelle - *Recherches consacrées aux moyens audio-visuels en Europe*. 1ère partie : bibliographie. Conseil de l'Europe, Londres/Strsbourg, 1967. 179 p.

. DAVIES (I.K.) - *Developing accountability in instructional systems technology*. - In : *Programmed learning and educational technology*, n° 3 july 1971. Pp. 151-160.

DIEUZEDE (H.) - *Educational technology and the development of education.* - In : *British Journal of educational technology*, n° 3 october 1971. Pp. 168-188.

DRUCKER (P.F.) - *The age of discontinuity? Guidelines to our changing society*. London, Heinemann, 1969, 369 p.

Education (Une) permanente à la télévision. - In : *Pour* n° 12, mai 1969.

Enregistreurs et lecteurs vidéo à usage domestique. Centre technique de l'Union européenne de Radiodiffusion, Bruxelles, 1971. 21 x 29 cm, fig., tabl. 33 p.

. FANNOY (P.) - *Télévision : Un time sharing audio-visuel... synthèse ou revolution ?* - In: *MDT*, n° 3, 1970. Pp. 3-6. Centrale AV Ordinateur + TV - Le projet devait être mis en place en Belgique dans une ville nouvelle rassemblant une population scolaire de 30 000 sujets (avec l'accord du Ministère de l'Education nationale).

FOTHER GILL (R.) - *News and views from Colleges and Institutes of Education.* - In : *Visual Education*, december 1971. Pp.22-25.

. *Gestion (La) de l'innovation dans l'enseignement. Rapport sur une session d'étude à St John's College*, Cambridge. - Paris, O.C.D.E., 1971. 69 p.

. HALL (G.) - *Cartridges discs. How will you use them ?* NAEB Publications, 1346 Connecticut Avenue, N.W., Washington, D.C. 200 36, 1971.

HORTON (L.) et HORTON (Ph.) - *Learning Centers : A working bibliography.* - In : *Audiovisual Instruction*, december 1970. Pp. 60-62.

. JENNINGS (W.) - *Educational parks : to-morrow's schools.* In : *Audiovisual Instruction*, n° 8 october 1971. Pp. 60-62. Description du projet de New York, le "Northeast Bronx Educational Park". (300 projets identiques aux Etats-Unis).

JOB (G.) - *Un pionnier du magazine vidéo.* - In : *Le technicien du film*, édition spéciale Audiovisuel 2000. Pp. 32-33. Journal vidéo "Médiscope" distribué dans 140 centres hospitaliers.

Jobs in instructional media. - *Association for educational Communications and Technology*, 1201 16th Street, N.W.., Washington, D.C. 200 36, 1971. 304 p.

LENHARDT (H.) - *Systèmes vidéo à usage domestique.* - In : *Revue UER*, n° 128 B, juillet 1971. Pp. 37-42.

LINNERZ (H.) - *"L'avènement des cassettes".* - In : *Documents, Revue des questions allemandes*, n° 5 1971. Pp. 67-80. Cet article fait partie d'un "dossier" figurant dans ce numéro intitulé *Révolution dans les mass media : les vidéo cassettes.*

. PEARSON (N.P.) et BUTLER (L.) - *Instructional material centers. Selected readings.* - Minneapolis, Minnesota, Burgess Publishing Company, 1969.

PLANQUE (B.) - *Audio-visuel et enseignement*. Tournai/Paris, 1971, Vasterman, 160 p.

POSTLETHWATT (S.N.), NOVAK (J.), MURRAY (H.T.) - *The audio-tutorial approach to learning*. Minneapolis, Minnesota, Burgess Publishing Company.
Mise en place d'un système d'enseignement (enregistrement, films, etc...) indépendant au niveau d'une discipline, la botanique.

PROVOST (G.) - *Le système d'éducation multi-media pour adultes du Québec : un rêve qui devient réalité.* In : *Prospectives*, vol. VII, n° 1, février 1971. Pp. 22-27.

. RICHTA (R.) - *La civilisation au carrefour*, Paris, Editions Anthropos, 1969.
Plan de branchement de 10 000 foyers au centre de calcul de Columbia, mentionne le rapport OETTINGER (A.) - A vision of technology and Education. Programme de Harward, reprint n° 1.

RIGG (R.P.) - *L'audio-visuel au service de la formation. Méthodes et matériels*. Paris, Entreprise Moderne d'Edition, 1971. 219 p.

ROBERTS (M.) - *Vidéo cassettes, the systems, the market, the future*. Martin Roberts and Associates Inc., Beverly Hills, California, 1970. 154 p.

. TAYLOR (J.) - *Learning resources Centers for the State University of New York.* - In : *Journal of educational Technology*, vol. I, n° 3, october 1970. Pp. 183-194.

Télécommunications : Toward National Policies for Education. Edited by C.R. Carpenter et J.W. Meaney. - Joint Council on Educational Telecommunications, 1126 16 th Street, N.W., Washington, D.C. 20026, 1971. 193 p.

WILLENER (A.), MILLIARD (G.), GANTY (A.) - *Vidéo et société virtuelle*. Coll. "Tema communication" - Tema Editions, Paris 1972. 262 p.